

EX-100/1000

Side Stream Oil in Water Analyzer



Ultrasonics



Fluorescence



Spectroscopy

The EX-100 is a side stream Oil in Water analyzer that uses fluorescence to provide continuous accurate measurements of oil concentrations in water. Reliable real-time data enables operators to take accurate discharge measurements and to improve efficiency of separation processes enabling cost reductions.

In addition to the EX-100 features, the EX-1000 model offers spectral analysis.

Features

- Patented ultrasonic cleaning
- Laser Induced Fluorescence (LIF)
- Side stream format
- Periodic homogenisation of sample
- Sample point
- Various measurement ranges configurable (0-100ppb, 0-10ppm, 0-100ppm [...] up to 0-20,000ppm)
- Accuracy: $\pm 1\%$ and measurement repeatability 99%
- Remote management and diagnostics
- Easy to install (no sample conditioning)
- Multiple communications options - 4-20mA, HART, Modbus, Extended Ethernet or WiFi
- Optional integrated spectrometer

Benefits

- Easy to use
- Low Cost Of Ownership (COO) with zero routine maintenance
- No degradation of signal or recalibration
- Side stream format offers improved sample control
- Droplet size compensation with homogenized samples
- Sample point facilitates laboratory correlation
- Remote control and monitoring (ideal for un-manned locations and remote process monitoring)



Measurement Performance	
Measurement principle	Laser Induced Fluorescence (LIF)
Range	0-20,000ppm*
* User may select any desired measurement from 0-100ppb, 0-10ppm, 0-100ppm [...] Up to 0-20,000ppm	
Accuracy	±1% of measurement range
Repeatability	> 99%
Response time	< 1 Second, continuous results
Operating Conditions	
Process temperature	0°C to 200°C
Process pressure	0-35 barg (180 barg optional)
Process flow	0-25 l/min (0-1,000l/min optional)
Operational ambient temperature	-20°C to 55°C
Cleaning	Ultrasonic (automatic)
Spectrometer Specification (1000 models only)	
Emission wavelength range	400-1,100nm
Resolution	0.5nm
Utilities	
Power supply	110 or 230 VAC (pre configured)
Power frequency	50 or 60 Hz
Power consumption	60W normal, 300W peak
Instrument air	5-8 barg (for pneumatic valve; electric valve option available)
Certification	
Ingress protection	IP66
Enclosure material	Aluminium (SS 316L optional)
ATEX Exd II 2 G IIB T4, IECEx, USA and Canada Class 1 Div 1	Purged air not required
IMO MEPC 107 (49)	IMO Certified, ABS, US Coast Guard, BV
Weight & Dimensions	
Weight (including stand, standard pneumatic Stainless Steel valve assembly, termination box and isolation switch)	Aluminium Enclosure: 93.55Kg Stainless Steel Enclosure: 141Kg
Dimensions	670W x 640D X 1112H mm (1120H mm for Stainless Steel enclosure)
Clear space	500mm front and rear
Communications	
4-20 Ma	Passive
Ethernet	Standard
HART, Modbus, Wireless (WiFi), Extended Ethernet	Optional
Remote access	Standard
Internal data storage	>10 years
Security	Multiple level password protection
Additional Information	
Flange fitting	1" ANSI RF standard (optional flange, sizes available)
Wetted parts	SS 316L (option of CR22, CR25, Monel, Inconel, Hastelloy, Titanium)
Sample take off point	Standard – integral to analyzer
Viewing window	Standard
Sample Conditioning	
Homogenisation	Ultrasonic
Gas removal, solids removal, temp. conditioning, flow control	Not Required
Discrepancy for oil droplet size	Automatic Oil Droplet Size Compensation as standard